



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,170	10/23/2003	Keith Pearson	2648P	2625
29141	7590	09/09/2004	EXAMINER	
SAWYER LAW GROUP LLP P O BOX 51418 PALO ALTO, CA 94303			HARRIS, ANTON B	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,170

Applicant(s)

PEARSON, KEITH

Examiner

Anton B Harris

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities:

At claim 2, line 1 recites a "BOLTS" interface. This term is not clearly defined nor spelled out in the Specification or claim. The Office interprets the "BOLTS" interface to be a part that attaches to the front end of a process tool.

Any further rejection of, or indications of the allowability of, either of claim 2 are based on claim 2, as it is understood by the Office. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonora et al. (6,135,698) in view of Slocum et al. (5,733,024).

Regarding claim 1, Bonora et al. (6,135,698) (col. 6, lines 14-67) discloses a module comprising:

an enclosure 100, and a frame 108 coupled to the enclosure 100, the frame 108 including a standard interface to the process tool (col. 6 line 33), but lacks a kinematic interface to the enclosure to facilitate, repeatable and high accuracy docking of the enclosure.

Slocum et al. (abstract) teaches a kinematic interface 16 to the enclosure 12 to facilitate, repeatable and high accuracy docking of the enclosure 12.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Bonora et al. (6,135,698) by providing a kinematic interface to the enclosure to facilitate, repeatable and high accuracy docking of the enclosure in order to precisely locate a module relative to the base frame in view of the teachings of Slocum et al.

Furthermore, the limitation of “for housing a device to be tested” in claim 1 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 3, Bonora et al. (6,135,698) discloses that the process tool comprises an equipment front end module (EFEM) (col. 6, line 33).

Regarding claim 6, Bonora et al. (col. 6, lines 44-50) discloses an internal air path to keep a substrate (col. 6 line 45) located therein substantially clean.

4. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonora et al. (6,135,698) modified as taught by Slocum et al. as applied to claim 1 above, and further in view of Bonora et al. (6,138,721).

Regarding claim 2, Bonora et al. (6,135,698) modified by Slocum et al. discloses the invention substantially as claimed, but lacks a BOLTS interface.

Bonora et al. (6,138,721) teaches a BOLTS interface 12.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified device of Bonora et al. (6,135,698) by providing a BOLTS interface in order to provide an adjustable interface in view of the teachings of Bonora et al. (6,138,721).

Regarding claim 4, the teachings of Slocum et al further include that the kinematic interface 16 comprises a plurality of spherical shaped objects (col. 1, lines 41-42) on the frame 12 which engage a plurality of machined features on the enclosure 12.

Regarding claim 5, the teachings of Slocum et al further include that the machined features 30 comprises a cone, groove or flat machined features. See abstract of Slocum et al.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonora et al. (6,135,698) modified as taught by Slocum et al. as applied to claim 6 above, and further in view of Behl et al. (6,193,339 B1).

Regarding claim 7, Bonora et al. (6,135,698) modified by Slocum et al. discloses the invention substantially as claimed, but lacks a second internal air path to cool electronics via the use of fans to draw heat air from the electronics out of the enclosure via ducts.

Behl et al. (col. 3, lines 30-35) teaches a second internal air path to cool electronics via the use of fans 22 to draw heat air from the electronics out of the enclosure 10 via ducts (figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified device of Bonora et al. (6,135,698) by providing a second internal air path to cool electronics via the use of fans to draw heat air from the

Art Unit: 2831

electronics out of the enclosure via ducts in order to dissipate heat and facilitate air flow in view of the teachings of Behl et al.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonora et al. (6,135,698) modified as taught by Slocum et al. as applied to claim 1 above, and further in view of Behl et al. (6,193,339 B1).

Regarding claim 8, Bonora et al. (6,135,698) modified by Slocum et al. discloses the invention substantially as claimed, but lacks that the enclosure includes fan modules.

Behl et al. (col. 3, lines 30-35) teaches that the enclosure 10 includes fan modules 22.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified device of Bonora et al. (6,135,698) by providing that the enclosure includes fan modules in order to dissipate heat and facilitate air flow in view of the teachings of Behl et al.

Furthermore, the limitation of “for removing hot air from the module” in claim 8 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 9, the teachings of Behl et al. further include that the enclosure 10 includes an exhaust vent (figure 2).

Conclusion

Art Unit: 2831

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tullis et al. U.S. Patent No. 4,532,970 discloses a particle-free dockable interface including a standard interface and an air path.

Kerrigan et al. U.S. Patent No. 6,134,107 discloses an enclosure including a frame, a fan, vents and an air path.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anton B Harris whose telephone number is (571) 272-1976. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dean Reichard, can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

abh

9/3/04

 9/3/04
DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800